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Hans-Dieter Bothe

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EXAMINER

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

The Amendment filed on May 2, 2008 has been acknowledged.

Claim Objections

Claim 21 is objected to because of the following informalities:

- before “at least one image sensor” (line 3), should insert – the --.
- “one of detect” (line 4) should be – detect --.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 21-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 21, 27, and 30, the phrase “staying the same in parts” is not understood.

The remaining claims are also rejected under 35 U.S.C. 112, second paragraph, for being dependent upon a rejected base claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 21, 22, 24, 26-28, and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Bothe et al. (US 2006/0187303).

Regarding claims 21, 27, and 30, Bothe et al. discloses a device and method (Fig. 1) for determining at least one calibration parameter (paragraph 30, lines 14-15) of at least one image sensor (Abstract, lines 1-3), comprising:

- at least one image sensor (12) to monitor a scene of a passenger compartment of a motor vehicle staying the same in parts (paragraph 0003, lines 7-10); and
- at least one processing unit (13) to at least one of detect a decalibration of the at least one image sensor in the operation of the at least one image sensor, as a

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function of image signals (imaging sensor status, paragraph 0020, lines 1-3; see Table, page 3), and to report, upon detecting a decalibration, the decalibration to at least one of a subsequent system and the driver (paragraph 0019, lines 7-10), and determine the at least one calibration parameter as a function of the image signals (calibration is performed based on the sensed image data, paragraph 0030);

- wherein the at least one image sensor derives the image signals at least from at least one invariant pattern in an image coverage range of the at least one image sensor (paragraph 0020, lines 4-6; paragraph 0030, lines 12-14).

Regarding claim 22, Bothe et al. discloses the at least one invariant pattern is formed by at least one reference object (47) applied in the scene (paragraph 0029, lines 1-3; paragraph 0005, lines 3-5) for determining the at least one calibration parameter (paragraph 030, lines 12-15).

Regarding claim 24, Bothe et al. discloses the at least one reference object includes at least one of a geometrical shape (shape of 47).

Regarding claim 26, Bothe et al. discloses the at least one invariant pattern is formed by at least one naturally occurring object of the scene, wherein the at least one invariant pattern is formed by at least one object located in a design-conditioned manner in the passenger compartment of a motor vehicle (designed for safety, paragraph 0002, lines

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1-3).

Regarding claim 28, Bothe et al. discloses the image signals are at least one of derived from at least one reference object (47) applied in the scene (Fig. 4) for the determination of at least one calibration parameter (paragraph 0030, lines 12-15), and derived at least from at least one naturally occurring object of the scene (paragraph 0003, lines 7-10), the at least one reference object at least one of being an illuminating arrangement (Fig. 4) and having a high reflectivity (light is reflected by 47, Fig. 4).

Regarding claim 30, Bothe et al. discloses further a computer readable medium (in 33) having a computer program (34, 35) having computer program code (paragraph 0023) which is executable by a computer processor (33).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 23, 25, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bothe et al..

Regarding claim 23, Bothe et al. discloses the at least one reference object is at least one of an illumination arrangement (41, 42, 47; Fig. 4) and is configured so that it has a high reflectivity (light is reflected from 47, Fig. 4).

Regarding claims 25 and 29, Bothe et al. discloses the at least one reference object (47) is applied to at least one object of the scene that is relevant with respect to a monitoring function of the at least one image sensor (42) (Fig. 4).

However, Bothe et al. does not disclose:

- regarding claim 23, the one reference object has a high reflectivity between 0.5 and 1.0.
- regarding claims 25 and 29, the at least one reference object is applied to at least one of at least one air bag flap, at least one air bag, and at least one steering wheel in the passenger compartment of the motor vehicle.

Nevertheless, it has been held that where the general conditions of a claim are disclosed (Bothe et al. discloses the reference object (47) has high reflectivity, Fig. 4), discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

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Furthermore, Bothe et al. discloses the imaging sensors are applied to vehicle occupant protection systems (paragraph 0002, lines 1-3). It is well-known in the art to use air bags for the vehicle occupant protection systems.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a reference object with the claimed reflectivity and applying the reference object to an air bag for the purpose of sensing image for vehicle occupant protection.

Response to Arguments

Applicant's arguments filed on May 2, 2008 have been fully considered but they are traversed in view of the rejections above.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (571) 272-2277. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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/Michael P. Nghiem/

Primary Examiner, GAU 2863

August 5, 2008